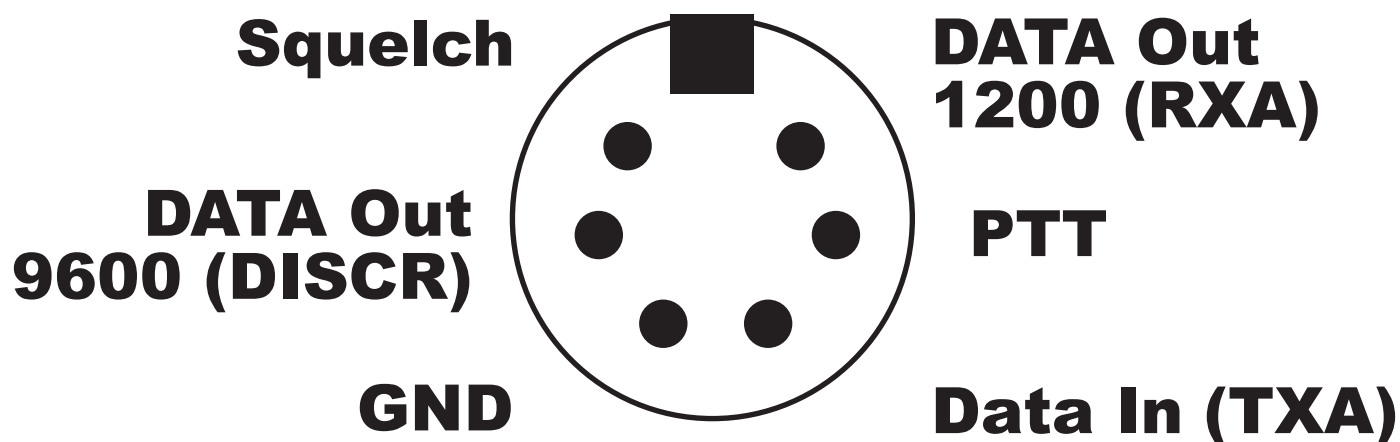


6-Pin MiniDIN Packet Connector

This connector is widely used on ham gear for connecting packet TNCs, multi-mode data controllers, sound card interfaces, etc.

Note: This is the same jack as the standard computer PS/2 mouse/keyboard connector. A dead PS/2 mouse is an excellent source of a cable to mate with this connector.



Viewed Looking Into FEMALE (Panel) Socket
(Soldering End of MALE Plug)

The 6-Pin MiniDIN "DATA" or "PACKET" connector is an industry standard adopted by all the Japanese ham mfrs. It is now superseding the various proprietary 7, 8 and 13-pin full-sized DIN connectors used by various manufacturers. The contacts on this connector provide access to:

1) TWO kinds of receive audio:

Raw non-deemphasized discriminator output sometimes labeled "9600 Baud Receive". De-emphasized squelched audio similar to what comes out the speaker, but at a fixed level unaffected by the volume control. It is sometimes labeled "1200 Baud Receive" or "RXD". On multi-mode radios (Yaesu FT-817, Yaesu FT-100, Icom 706, etc), only the "1200 baud" output will be live on AM, SSB or CW since the 9600 baud output is associated only with the discriminator of FM receivers.

2) TX audio input (sometimes misleadingly labeled "TX Data Input" or "TXD") In some radios, a menu setting for "1200" vs "9600" baud will determine if this input goes either into the same channel as the mic input (but at a higher audio level) for 1200 baud packet, SSTV, EchoLink, AFSK RTTY, etc, or is DC-coupled directly into the TX modulator (for 9600 baud packet).

3) TX PTT (confusingly labeled "Standby" by Kenwood) -- normal ground-to-transmit line just like most mic inputs.

4) Receiver Squelch status line (normally no sig-squelch-closed = 0V, signal active-squelch open = 5V). Sometimes labeled "COR" (Carrier Operated Relay - an archaic term from the early days of FM repeaters), "COS" (Carrier Operated Switch), "RX", "CD" (Carrier Detect), "Activity" or "Busy".

5) Common/Ground.

Note that despite the misleading labels referring to data input and output, the jack only carries AUDIO, AUDIO, AUDIO! THERE IS NO ACTUAL RXD or TXD DATA in the sense of RS-232 or TTL-level streams of 1s and 0s anywhere on this connector!!!

This connector is the perfect point to connect packet TNCs, soundcard interfaces, phone patches, IRLP/EchoLink controllers, APRS trackers, paging encoders, or any other device that needs access to the transmit and receive audio of a radio.

These audio inputs and outputs are high-level (100-300mV), similar to home stereo "LINE" input level seen at RCA jacks on tuners, amps, tape decks, etc; NOT the the 5-10mV level seen at most mic input jacks.

NOTE that this means that you have to set the audio output ("TRANSMIT") level of sound card interfaces, TNCs, data controllers, APRS trackers, etc to a MUCH higher level than you would for a normal connection into the mic jack. With some devices you will have to shift internal jumpers, or exercise software menu commands to increase output level (recent Kantronics TNCs for example).

On most radios with this port, grounding the DIN-6 PTT line mutes the front panel mic input to prevent extraneous shack noises from getting mixed with whatever you feed into the transmit audio input.

You can connect a TinyTrak here very effectively if you:

- 1) Change R5 (220K resistor) on the TT to about 27-33K to boost the TX audio level from mic level to line level.
- 2) Connect the direct DC-coupled "CARRIER DET" line of the TT to the MiniDIN "SQUELCH" or "COR" line.

Note that this connector is exactly the same one used on PS/2 keyboard and mouse cables. A PS/2 keyboard extension cable is an excellent source of a plug and cable assembly to mate with the jack on the radio. [at a fraction of the cost of the optional Kenwood or Yaesu cable assemblies!] Cut the female end off, strip the bare end and connect the bare leads to the appropriate pins of whatever mates with your tracker, TNC, or soundcard interface.

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